



## SEMINARS IN CHEMICAL AND BIOMOLECULAR ENGINEERING

Friday, February 17, 2017 10:00AM

Boelter Hall → 3400



Presented by

**D**r. Wilfred Chen

Gore Professor of Chemical and Biomolecular Engineering,  
University of Delaware

### **“Adding Logic to Complex Protein Functions”**

*Proteins are the most versatile among the various biological building blocks. However, the strength of proteins - their versatility and specific interactions - also complicates and hinders their systematic design and engineering. Our lab has been interested in exploiting the modular nature of protein domains to design synthetic complexes that can perform new biological functions. By adding logical components into the design, protein complexes that are dynamic rather than static in nature can be created to adapt to the constantly changing cellular environments. In this presentation, I will outline several successful examples in connecting exchangeable protein domains for predicative engineering applications in (1) energy substantiality and (2) human health.*

**Wilfred Chen** joined the University of Delaware in January 1, 2011 as the Gore Professor of Chemical Engineering. He obtained his B.S. degree from UCLA in 1988 and his Ph.D. from Caltech in 1993, both in Chemical Engineering. After one-year postdoc in Switzerland, he joined UC Riverside in 1994. He was Professor of Chemical and Environmental Engineering and the holder of Presidential Chair until he joined Delaware in 2011. His research interests are in Synthetic Biology and Protein Engineering. Prof. Chen has published more than 230 journal papers and delivered over 80 invited lectures. He serves on the editorial board for many scientific publications including Applied and Environmental Microbiology and Biotechnology and Bioengineering. He is also the editor/associate editor for Biochemical Engineering Journal, Biotechnology Journal, and AIChE Journal. He is a fellow of the



American Association for the Advancement of Science (AAAS) and the American Institute for Medical and Biological Engineering (AIMBE).

Prof. Chen has also received several awards, including NSF Career Award, AIChE Food, Pharmaceutical, and Bioengineering Division 15c Plenary Lecture, Biotechnology Progress Award for Excellence in Biological Engineering Publication, Daniel I.C. Wang Award for Excellence in Biochemical Engineering, and Marvin J. Johnson Award in Microbial & Biochemical Technology.